

## WHAT IS CLAIMED IS:

1. A golf club comprising a hollow golf club head which has a face portion for striking a golf ball, a crown portion connected to the face portion, and a sole portion connected to the face portion, wherein:

a first region whose surface area constitutes 5% or more of a total surface area of the crown portion is formed by a first outer shell member in a region of the crown portion which is located along a connecting edge of the crown portion connecting to the face portion and within a distance of 50 mm from the connecting edge, and a second region whose surface area constitutes 5% or more of the total surface area of the sole portion is formed by a second outer shell member in a region of the sole portion which is located along a connecting edge of the sole portion connecting to the face portion and within a distance of 50 mm from the connecting edge of the sole portion; and

when an product of an elastic modulus of the first outer shell member in a direction in which a striking surface is oriented and a thickness of the first outer shell member in the first region is taken as a first equivalent rigidity and a product of an elastic modulus of

the second outer shell member in the direction in which the striking surface is oriented and a thickness of the second outer shell member in the second region is taken as a second equivalent rigidity, a ratio of either lower of the first equivalent rigidity and the second equivalent rigidity to the higher is equal to or less than 0.75.

2. The golf club according to claim 1, wherein either or both of said first and second outer shell members are composed of a composite material in which a fiber reinforced plastic material is laminated.

3. A method of designing a hollow golf club head which has a face portion for striking a golf ball, a crown portion connected to the face portion, and a sole portion connected to the face portion, wherein:

a first region whose surface area constitutes 5% or more of the total surface area of the crown portion is formed by a first outer shell member in a region of the crown portion which is located along a connecting edge of the crown portion connecting to the face portion and within a distance of 50 mm from the connecting edge; a second region whose surface area constitutes 5% or more of the total surface area of the sole portion is formed by a

second outer shell member in a region of the sole portion which is located along a connecting edge of the sole portion connecting to the face portion and within a distance of 50 mm from the connecting edge of the sole portion; a product of an elastic modulus of the first outer shell member in a direction in which a striking surface is oriented and a thickness of the first outer shell member in the first region is taken as a first equivalent rigidity; and a product of an elastic modulus of the second outer shell member in the direction in which the striking surface is oriented and a thickness of the second outer shell member in the second region is taken as a second equivalent rigidity, the method comprising the steps of:

holding in advance the characteristic data that expresses changes in initial ballistic characteristics of a golf ball caused when either of the first and second equivalent rigidities is changed while the other is kept constant;

using the held characteristic data to set a ratio between the first equivalent rigidity and the second equivalent rigidity in accordance with the initial ballistic characteristics of the golf ball struck by a golfer; and

employing two members that conform to the set ratio as

the first and second outer shell members.

4. The method of designing a hollow golf club head according to claim 3, wherein:

said characteristic data is prepared for each of plural head speeds at which golfers strike golf balls; and  
said ratio is set according to a head speed.

5. The method of designing a hollow golf club head according to claim 3, wherein:

said characteristic data is prepared for each of plural loft angles; and  
said ratio is set according to a loft angle.

6. The method of designing a hollow golf club head according to claim 4 or 5, wherein:

a composite material in which a fiber reinforced plastic material is laminated is used for either or both of said first and second outer shell members; and  
said ratio is established by regulating an orientation angle of the composite material.

7. A golf club comprising a hollow golf club head which has a face portion for striking a golf ball, a crown

portion connected to the face portion, and a sole portion connected to the face portion, the golf club being included among a series of golf clubs adapted for different head speeds, wherein:

a first region whose surface area constitutes 5% or more of a total surface area of the crown portion is formed by a first outer shell member in a region of the crown portion which is located along a connecting edge of the crown portion connecting to the face portion and within a distance of 50 mm from the connecting edge, and a second region whose surface area constitutes 5% or more of a total surface area of the sole portion is formed by a second outer shell member in a region of the sole portion which is located along a connecting edge of the sole portion connecting to the face portion and within a distance of 50 mm from the connecting edge of the sole portion;

when a product of an elastic modulus of the first outer shell member in a direction in which a striking surface is oriented and a thickness of the first outer shell member in the first region is taken as a first equivalent rigidity and a product of an elastic modulus of the second outer shell member in the direction in which the striking surface is oriented and a thickness of the second outer shell member in the second region is taken as a

second equivalent rigidity, a ratio of either lower of the first equivalent rigidity and the second equivalent rigidity to the higher is equal to or less than 0.75; and

a composite material in which a fiber reinforced plastic is laminated is used for either or both of the first and second outer shell members, having an orientation angle of fibers thereof regulated according to a head speed so as to establish said ratio.

8. A golf club comprising a hollow golf club head which has a face portion for striking a golf ball, a crown portion connected to the face portion, and a sole portion connected to the face portion, the golf club being included among a series of golf clubs with different loft angles, wherein:

a first region whose surface area constitutes 5% or more of a total surface area of the crown portion is formed by a first outer shell member in a region of the crown portion which is located along a connecting edge of the crown portion connecting to the face portion and within a distance of 50 mm from the connecting edge, and a second region whose surface area constitutes 5% or more of a total surface area of the sole portion is formed by a second outer shell member in a region of the sole portion which is

located along a connecting edge of the sole portion connecting to the face portion and within a distance of 50 mm from the connecting edge of the sole portion;

when a product of an elastic modulus of the first outer shell member in a direction in which a striking surface is oriented and a thickness of the first outer shell member in the first region is taken as a first equivalent rigidity and a product of an elastic modulus of the second outer shell member in the direction in which the striking surface is oriented and a thickness of the second outer shell member in the second region is taken as a second equivalent rigidity, a ratio of either lower of the first equivalent rigidity and the second equivalent rigidity to the higher is equal to or less than 0.75; and

a composite material in which a fiber reinforced plastic is laminated is used for either or both of the first and second outer shell members, having an orientation angle of fibers thereof regulated according to a loft angle of the golf club so as to establish said ratio.